

IN THE CLAIMS:

Please amend claims 1, 3, 6, 9-12, 14, 15, 17, 20-29, 31, 34-37, 39, and 41 and add new claim 42, as follows.

1. (Currently Amended) A method of optimizing an establishment of a communication connection ~~between a mobile node and a correspondent node in a packet based communication network which includes a plurality of call session control function elements and a server of the mobile node constituting a communication subsystem infrastructure~~, the method comprising the steps of:

starting an application level communication connection setup procedure between the a mobile node and the a correspondent node via the a communication subsystem infrastructure of a packet based communication network by transmitting and receiving application level signaling messages between the correspondent node and the mobile node;

transmitting, during the application level communication connection setup procedure, a trigger signal from an application layer to a network layer in the mobile node wherein the trigger signal comprises the address of the correspondent node; and

performing, in response to the trigger signal, a network level route optimization procedure during the application level communication connection setup procedure.

2. (Original) The method according to claim 1, wherein the packet based communication network comprises wireless communication network parts.
3. (Currently Amended) The method according to claim 1, wherein the network level is based on an internet protocol (IP) based transport protocol.
4. (Original) The method according to claim 3, wherein the address of the correspondent node is an IP address.
5. (Original) The method according to claim 3, wherein the IP based transport protocol uses Mobile IPv6.
6. (Currently Amended) The method according to claim 5, wherein the communication subsystem infrastructure further includes ~~server is a~~ home agent.
7. (Original) The method according to claim 1, wherein the application level communication connection setup procedure is executed by using the session initiation protocol wherein the address of the correspondent node is provided to the mobile node in a session description protocol descriptor.

8. (Original) The method according to claim 1, wherein the network level route optimization procedure comprises a binding update procedure in which the care-of-address of the mobile node is transmitted to the correspondent node.

9. (Currently Amended) The method according to claim 1, wherein ~~the step of~~ performing the network level route optimization procedure comprises ~~a step of~~ initializing a network level route optimization on the mobile node side.

10. (Currently Amended) The method according to claim 9, wherein ~~the step of~~ performing the network level route optimization procedure comprises ~~a step of~~ initializing a network level route optimization on the correspondent node side when an network level route optimization signaling from the mobile node is received.

11. (Currently Amended) The method according to claim 1, wherein ~~the step of~~ performing the network level route optimization procedure is completed before the application level communication connection setup procedure is completed.

12. (Currently Amended) The method according to claim 1, wherein ~~the step of~~ transmitting the trigger signal is performed via an interface provided between the application layer and a network level module in the network layer of the mobile node.

13. (Original) The method according to claim 12, wherein the interface is implemented by an application programming interface.

14. (Currently Amended) The method according to claim 12, further comprising ~~a step of~~ transmitting an acknowledgment from the network level module to the application layer after the trigger signal comprising the address of the correspondent node is received.

15. (Currently Amended) A system for optimizing an establishment of a communication connection, wherein the system is configured to: ~~between a mobile node and a correspondent node in a packet based communication network which includes a plurality of call session control function elements and a server of the mobile node constituting a communication subsystem infrastructure, the system comprising:~~

~~means for performing~~perform an application level communication connection setup procedure between ~~the~~ a mobile node and ~~the~~ a correspondent node via the communication subsystem infrastructure of a packet based communication network by transmitting and receiving application level signaling messages between the correspondent node and the mobile node;

~~means for producing and transmitting~~produce and transmit, during the application level communication connection setup procedure, a trigger signal from an application

layer to a network layer in the mobile node wherein the trigger signal comprises the address of the correspondent node; and

perform ~~means for performing~~, in response to the trigger signal, an network level route optimization procedure during the application level communication connection setup procedure.

16. (Original) The system according to claim 15, wherein the packet based communication network comprises wireless communication network parts.

17. (Currently Amended) The system according to claim 15, wherein the network level is based on an internet protocol (IP) based transport protocol.

18. (Original) The system according to claim 17, wherein the address of the correspondent node is an IP address.

19. (Original) The system according to claim 17, wherein the IP based transport protocol uses Mobile IPv6.

20. (Currently Amended) The system according to claim 19, wherein the communication subsystem infrastructure further includes ~~wherein the server is a home agent~~.

21. (Currently Amended) The system according to claim 15, wherein the system is further configured to perform means for performing the application level communication connection setup procedure and to use the session initiation protocol wherein the address of the correspondent node is provided to the mobile node in a session description protocol descriptor.

22. (Currently Amended) The system according to claim 15, wherein the system is further configured to perform means for performing the network level route optimization procedure and to execute a binding update procedure in which the care-of-address of the mobile node is transmitted to the correspondent node.

23. (Currently Amended) The system according to claim 15, wherein the system is further configured to perform means for performing the network level route optimization procedure and to initialize an network level route optimization on the mobile node side.

24. (Currently Amended) The system according to claim 23, wherein the system is further configured to perform means for performing the network level route optimization procedure and to initialize an network level route optimization on the

correspondent node side when an network level route optimization signaling from the mobile node is received.

25. (Currently Amended) The system according to claim 15, wherein the system is further configured ~~means for performing to perform~~ the network level route optimization procedure and to complete the network level route optimization procedure before the application level communication connection setup procedure is completed.

26. (Currently Amended) The system according to claim 15, wherein the system is configured to transmit and produce ~~means for transmitting and producing~~ the trigger signal and comprises an interface provided between the application layer and a network level module in the network layer of the mobile node.

27. (Original) The system according to claim 26, wherein the interface is implemented by an application programming interface.

28. (Currently Amended) The system according to claim 26, further system is further configured to produce and transmit ~~comprising means for producing and transmitting~~ an acknowledgment from the network level module to the application layer after the trigger signal comprising the address of the correspondent node is received.

29. (Currently Amended) A network node₁, ~~usable in a packet-based communication network which includes a plurality of call session control function elements and a server of the network node constituting a communication subsystem infrastructure, wherein an establishment of a communication connection between the network node and a correspondent node in the packet-based communication network is optimized, wherein the network is configured to~~ the network node comprising:

~~means for performing~~perform an application level communication connection setup procedure between the network node and the ~~a~~ correspondent node via the ~~a~~ communication subsystem infrastructure of a packet based communication network and to transmit and receive ~~by transmitting and receiving~~ application level signaling messages between the correspondent node and the network node;

~~means for producing and transmitting~~produce and transmit, during the application level communication connection setup procedure, a trigger signal from an application layer to a network layer in the network node wherein the trigger signal comprises the address of the correspondent node; and

~~means for performing~~ perform, in response to the trigger signal, a network level route optimization procedure during the application level communication connection setup procedure.

30. (Original) The network node according to claim 29, wherein the packet based communication network comprises wireless communication network parts.

31. (Currently Amended) The network node according to claim 29, wherein the network level is based on an internet protocol (IP) based transport protocol.

32. (Original) The network node according to claim 31, wherein the address of the correspondent node is an IP address.

33. (Original) The network node according to claim 31, wherein the IP based transport protocol uses Mobile IPv6.

34. (Currently Amended) The network node according to claim 33, communication subsystem infrastructure ~~wherein the server is~~ further includes a home agent.

35. (Currently Amended) The network node according to claim 29, wherein the network node is configured to perform ~~means for performing~~ the application level communication connection setup procedure and to use the session initiation protocol wherein address of the correspondent node is provided in a session description protocol descriptor.

36. (Currently Amended) The network node according to claim 29, wherein the network node is configured to perform ~~means for performing~~ the network level route optimization procedure and to execute a binding update procedure in which the care-of-address of the network node is transmitted to the correspondent node.

37. (Currently Amended) The network node according to claim 29, wherein the network node is configured to perform ~~means for performing~~ the network level route optimization procedure and to initialize a network level route optimization on the network node side.

38. (Original) The network node according to claim 29, wherein the network level route optimization procedure is completed before the application level communication connection setup procedure is completed.

39. (Currently Amended) The network node according to claim 29, wherein the network node is configured to transmit and produce ~~means for transmitting and producing~~ the trigger signal and further comprises an interface provided between the application layer and network level module in the network layer of the network node.

40. (Original) The network node according to claim 39, wherein the interface is implemented by an application programming interface.

41. (Currently Amended) The network node according to claim 39, wherein the network node is further configured to produce and transmit ~~further comprising means for producing and transmitting~~ an acknowledgment from the network level module to the application layer after the trigger signal, comprising the address of the correspondent node is received.

42. (New) An apparatus usable in a packet based communication network, comprising:

means for performing an application level communication connection setup procedure between a network node and a correspondent node via a communication subsystem infrastructure of the packet based communication network by transmitting and receiving application level signaling messages between the correspondent node and the network node;

means for producing and transmitting, during the application level communication connection setup procedure, a trigger signal from an application layer to a network layer in the network node wherein the trigger signal comprises the address of the correspondent node; and

means for performing, in response to the trigger signal, a network level route optimization procedure during the application level communication connection setup procedure.